



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/870,073	05/30/2001	Joseph L. Menner	1670A1	6760

7590 10/24/2003

PPG INDUSTRIES, INC.
Intellectual Property Department
One PPG Place
Pittsburgh, PA 15272

EXAMINER

LEWIS, CHERYL RENEA

ART UNIT

PAPER NUMBER

2177

DATE MAILED: 10/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Applicant No .	Applicant(s)
	09/870,073	MENNER ET AL.
	Examiner Cheryl Lewis	Art Unit 2177

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 30 May 2001.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-45 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____
2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u>	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

1. Claims 1-45 are presented for examination.
2. The information disclosure statements filed on September 20, 2001, paper no. 2, complies with the provisions of MPEP § 609. They have been placed in the application file, and the information referred to therein has been considered as to the merits.

Drawings

3. The formal drawings filed on May 30, 2001 have been approved by the draftsman and have been placed in the application file.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 2, 4, 5, 7, 9, 11-18, 20, 21, 23, 25, and 27-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sherman (Pat. No. 4,931,929 filed 8/14/1987) and Dichter (Pat. No. 6,137,903 filed 6/3/1997).

6. Regarding Claims 1, 11, 12, 14, 17, 27, 28, and 30, Sherman teaches a design component selection computer with specification of product characteristics and of color by machine readable device.

The method and associated system for a design component selection computer with specification of product characteristics and of color by machine readable device as taught or suggested by Sherman includes:

providing a plurality of decorative product databases ((1) Abstract, lines 4-9, 'An image database is provided, preferably in the form of an addressable optical videodisk, each frame of which portrays an individual design component, and the images are displayed by operation of a computer-controlled archive system such as a random-access optical videodisk player.', col. 6, lines 63-65, 'Each disk 22 placed within

videodisk player 20 comprises a database of design component product images.' (2) Abstract, lines 9-13, 'A characteristics database is provided to identify each portrayed design component by a variety of product categories including at least color, price, manufacturer...', col. 9, lines 59-66, 'In step 400, the present inventive system then chooses records from the database of product characteristics which indicate the characteristics specified by the user in the previous steps. As presently preferred, for each product type there is created a single file or data records, and a number of files of key records corresponding to the number of categories established for product characteristics of the product type.') each database containing product data on one type of decorative product ((1) Abstract, lines 4-7, 'An image database is provided, preferably in the form of an addressable optical videodisk, each frame of which portrays an individual design component...', col. 8, lines 9-12, 'However, all products, regardless of type, share at least four common categories of characteristics: price, manufacturer, color and a location of the design component image within an image database.', (2) col. 9, lines 59-66, 'In step 400, the present inventive system then chooses records from the database of product characteristics which indicate the characteristics specified by the user in the previous steps. As presently preferred, for each product type there is created a single file or data records, and a number of files of key records corresponding to the number of categories established for product characteristics of the product type.', col. 7, lines 65-68, col. 8, lines 1-5, 'In step 100, a database of records corresponding to design component products is provided to the computer 12. Each record of this database identifies a plurality of characteristics of the corresponding design component

products. Products are grouped into files by type, such as chairs, carpets, or wallcovering, and all products within a given type are described within their corresponding records by a common group of categories of characteristics.') and color data comprising a color value for each decorative product (col. 7, lines 58-66, 'In step 350, the user selects the category of color as one characteristic in which to specify a selection. One advantageous manner specifying such a color constraint to the system of the present invention is by exposing a pre-existing product sample bearing the desired color to a colorimeter 28, which preferably digitizes the quantities of hue, chroma and value corresponding to the exposed color, and then transfer such values through channel 34 to computer 12.', col. 9, lines 9-18, 'Where a portable product sample is not available, such as where the pre-existing color selection is paint supplied to walls, a color reference card structure such as is illustrated in FIG. 2 may be utilized at the site of the pre-existing product. Typically a large number of such cards 70 are provided, each bearing a color field 71 having a unique combination of hue, chroma and value, and a machine-readable identification code 74 which may identify the color field by either serial number or quantification of hue, chroma and value.'); selecting at least one decorative product in one or more of the databases (col. 7, lines 62-68, col. 8, lines 1-5, 'Turning now to FIG. 3, a process of system operation is illustrated for the selection and display of design component products meeting desired constraints of price, color and other characteristics. In step 100, a database of records corresponding to design component products is provided to the computer 12. Each record of this database identifies a plurality of characteristics of the corresponding design component product.

Products are grouped into files by type, such as chairs, carpets, or wallcovering, and all products within a given type are described within their corresponding records by a common group of categories of characteristics.'); searching for decorative products (col. 12, lines 56-61, 'In operation of the present invention, the computer 12 initially displays on monitor 16 a query to the user for selection of a design component product type, and preferably displays also a list of valid responses to the query. The user indicates an appropriate selection through keyboard 18 and channel. 35.'); and identifying one or more decorative products which have color values of the decorative product (col. 7, lines 58-66, 'In step 350, the user selects the category of color as one characteristic in which to specify a selection. One advantageous manner specifying such a color constraint to the system of the present invention is by exposing a pre-existing product sample bearing the desired color to a colorimeter 28, which preferably digitizes the quantities of hue, chroma and value corresponding to the exposed color, and then transfer such values through channel 34 to computer 12.', col. 9, lines 9-18, 'Where a portable product sample is not available, such as where the pre-existing color selection is paint supplied to walls, a color reference card structure such as is illustrated in FIG. 2 may be utilized at the site of the pre-existing product. Typically a large number of such cards 70 are provided, each bearing a color field 71 having a unique combination of hue, chroma and value, and a machine-readable identification code 74 which may identify the color field by either serial number or quantification of hue, chroma and value.').

However, Sherman does not expressly teach an identification of the color data of the decorative product and coordinating color based on the color data identified.

Dichter teaches an identification of the color data (col. 3, lines 13-15, '...is primarily a red dress of a given style and shape having a pattern of primarily red color variations, as indicated by the stippling pattern.') of the decorative product (col. 3, lines 16-27, 'Frequently, it may be desirable in the desktop publishing environment to provide in the same catalog, for example, another dress of a different style and shape shown at 20 as an original image which is primarily blue on, for example, a yellow background 21, representing a composite original image 22 which may be a photograph. The blue dress has a different pattern of primarily blue variations, as indicated by the different stippling pattern. It is desired by the user to change the color of the blue dress to a color scheme similar to the red dress. It is of course understood that in this example when the term "red" dress is employed, that red is a variation of colors of different hue, saturation, and luminance (HSL).') and coordinating color based on the color data identified (col. 3, lines 16-27, 'Frequently, it may be desirable in the desktop publishing environment to provide in the same catalog, for example, another dress of a different style and shape shown at 20 as an original image which is primarily blue on, for example, a yellow background 21, representing a composite original image 22 which may be a photograph. The blue dress has a different pattern of primarily blue variations, as indicated by the different stippling pattern. It is desired by the user to change the color of the blue dress to a color scheme similar to the red dress. It is of

course understood that in this example when the term "red" dress is employed, that red is a variation of colors of different hue, saturation, and luminance (HSL).').

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the design component selection method of Sherman with Dichter's means to identify the color data of the decorative product and coordinate a color based on the color data identified because Dichter's means enables a color transformation of a color variation in an original image into a new color variation in a transformed image of the original image based on a representative color in a target image (Abstract, lines 1-4).

7. Regarding Claims 2 and 18, Spencer teaches the databases are in digital form (col. 8, lines 25-29, 'In step 200, an image database is provided to a video archive system. In the presently preferred embodiment, the image database resides on the videodisk 22 and the videodisk player 20 comprises an archive system providing access to images within the image database.') and stored in a computer (col. 4, lines 27-39, 'Herein is discloses an apparatus and process for the identification and visual selection of design components. The system utilizes an optical videodisk player system for retrieval of images of design component products, and a general purpose programmable digital computer configured to control the disk player. The computer is programmed to access a database of product characteristics, including color, determine which of the products match characteristics defined by the user, and then direct the disk player to provide a display of each such matching product together with a computer generated display of the product characteristics for inspection by the user.').

8. Regarding Claims 4 and 20, Sherman teaches the searching function is done on a computer (col. 12, lines 56-59, 'In operation of the present invention, the computer 12 initially displays on monitor 16 a query to the user for selection of a design component product type, and preferably displays also a list of valid responses to the query.').

9. Regarding Claims 5 and 21, Sherman teaches the aid of an algorithm (col. 14, lines 30-35, 'The following is a listing of a control program for computer 12 which implements the process of the present invention on the preferred hardware combination described above. The program is written in the widely-used high-level language called C.').

10. Regarding Claims 7 and 23, Sherman teaches data on paints (col. 8, lines 7-9, 'For instance, paint is described by liquid volume whereas furniture can be described by height, width, and depth.').

11. Regarding Claims 9 and 25, Sherman teaches hue, chroma, and brightness of the product (col. 11, lines 6-13, 'Colors have been quantified according to the Munsell and CIE systems as a combination of three coordinates namely, hue, chroma, and brightness. Hue is defined as the frequency of the light comprising the color. Chroma is also referred to as the saturation of the color, and brightness is known as the degree of white or black which is combined with the other characteristics of the color.').

12. Regarding Claims 13, 16, 29, and 32, Sherman teaches the products comprising product supplier or price (Abstract, lines 9-12, 'A characteristics database is provided to identify each portrayed design component by a variety of product categories including at least color, price, manufacturer...').

13. Regarding Claims 15 and 31, Sherman teaches a single supplier price (Abstract, lines 9-12, 'A characteristics database is provided to identify each portrayed design component by a variety of product categories including at least color, price, manufacturer...').

14. Claims 3 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sherman (Pat. No. 4,931,929 filed 8/14/1987) and Dichter (Pat. No. 6,137,903 filed 6/3/1997) as applied to claims 1 and 17 above, and further in view of Eichel (Pat. No. 6,459,435 B1 filed 1/11/2000).

15. Regarding Claims 3 and 19, Sherman and Dichter do not expressly teach a computer network.

Eichel teaches a computer network (col. 4, lines 57-60, 'Moreover, the present invention preferably is implemented in a client-server environment. Preferably, a client computer and a server computer are connected via a network, preferably the Internet.').

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the methods of Sherman and Dichter with the computer network method of Eichel because Eichel's computer network enables a storyboard of interior design surface treatments for a commercial and/or residential interior space that is generated by obtaining arrays of patterns that correspond to a user search criteria from a stored set of patterns for interior design surface treatments (Abstract, lines 1-5).

16. Claims 6 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sherman (Pat. No. 4,931,929 filed 8/14/1987) and Dichter (Pat. No. 6,137,903 filed

6/3/1997) as applied to claims 1 and 17 above, and further in view of Koehler (Pat. No. 4,887,906 filed 4/11/1988).

17. Regarding Claims 6 and 22, Sherman and Dichter do not expressly teach a spectrophotometer.

Koehler teaches a spectrophotometer (Abstract, lines 1-4, 'A color match predictability system having a color sample, a predictability guide with sections having varying degrees of halftones, a spectrophotometer, and a computer with input and output devices.', col. 3, lines 31-36, The output of spectrophotometer 33 may be a series of standard digital output signals. These digital signals will relate the amount of measured light energy associated with a plurality of wave lengths for light entering element 37 across the visible spectrum from ultraviolet to blue, to green, yellow, red, etc.').

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the methods of Sherman and Dichter with the spectrophotometer means of Koehler's method because Koehler's method enables a color match predictability system having a color sample, a predictability guide with sections having varying degrees of halftones, a spectrophotometer, and a computer with input and output devices, a light is directed at the color sample and ten passed into the spectrophotometer where its color spectrum is analyzed, converted into data, and fed to the computer (Abstract, lines 1-7).

18. Claims 8 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sherman (Pat. No. 4,931,929 filed 8/14/1987) and Dichter (Pat. No. 6,137,903 filed

6/3/1997) as applied to claims 1 and 17 above, and further in view of Ringland et al. (Pat. No. 6,122,391 filed 11/7/1997, hereinafter Ringland).

19. Regarding Claims 8 and 24, Sherman teaches products consisting of fabric (col. 10, lines 55-58, 'Some characteristics, such as price and color, are easily quantified, while other characteristics such as fabric type or manufacturer, are assigned index number arbitrarily.').

However, Sherman and Dichter do not expressly teach products consisting of wallpaper, floor coverings, and window treatments.

Ringland teaches products consisting of wallpaper, floor coverings, and window treatments (Abstract, lines 16-18, 'Wallpaper patterns, drapery material, floor covering or paint can then be rapidly selected on the basis of matching color.').

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the methods of Sherman and Dichter with the products consisting of wallpaper, floor covering, and window treatments as taught by the method of Ringland because Ringland's method enables a system for selecting decorative material on the basis of large numbers of high-resolution, full color images of decorative materials stored in a compressed format on an inexpensive medium such as a CD-ROM (Abstract, lines 1-4).

20. Claims 10 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sherman (Pat. No. 4,931,929 filed 8/14/1987) and Dichter (Pat. No. 6,137,903 filed 6/3/1997) as applied to claims 1 and 17 above, and further in view of Arai (Pat. No. 5,559,604 filed 9/27/1994).

21. Regarding Claims 10 and 26, Sherman and Dichter do not expressly teach L*a*b* measurement of the product.

Arai teaches L*a*b* measurement of the product (col. 2, lines 9-16, 'In accordance with the first aspect of the present invention, the spectralphotometer and the transforming means for transforming colorimetric values into color separation values are provided. Since the colorimetric values such as XYZ values, L*a*b* values, and L*u*v* values are dependent on the types of illuminating light during measurement, the colorimetric values measured under different illuminants possess different values.').

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the methods of Sherman and Dichter with the L*a*b* measurement of a product as taught by the method of Arai because Arai's method enables colorimetric values such as L*a*b* values to be transformed into color separation values such as CMYK values dependent on the characteristics of a color output device by using a multilayered feedforward neural network (Abstract,lines 1-4).

22. Claims 33 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sherman (Pat. No. 4,931,929 filed 8/14/1987); Dichter (Pat. No. 6,137,903 filed 6/3/1997); and Rice et al. (Pat. No. 6,563,510 B1 filed 3/30/2000, hereinafter Rice).

23. Regarding Claims 33 and 38, Sherman teaches a design component selection computer with specification of product characteristics and of color by machine readable device.

The method and associated system for a design component selection computer with specification of product characteristics and of color by machine readable device as taught or suggested by Sherman includes:

providing a plurality of decorative product databases ((1) Abstract, lines 4-9, 'An image database is provided, preferably in the form of an addressable optical videodisk, each frame of which portrays an individual design component, and the images are displayed by operation of a computer-controlled archive system such as a random-access optical videodisk player.', col. 6, lines 63-65, 'Each disk 22 placed within videodisk player 20 comprises a database of design component product images.' (2) Abstract, lines 9-13, 'A characteristics database is provided to identify each portrayed design component by a variety of product categories including at least color, price, manufacturer...', col. 9, lines 59-66, 'In step 400, the present inventive system then chooses records from the database of product characteristics which indicate the characteristics specified by the user in the previous steps. As presently preferred, for each product type there is created a single file or data records, and a number of files of key records corresponding to the number of categories established for product characteristics of the product type.') each database containing product data on one type of decorative product ((1) Abstract, lines 4-7, 'An image database is provided, preferably in the form of an addressable optical videodisk, each frame of which portrays an individual design component...', col. 8, lines 9-12, 'However, all products, regardless of type, share at least four common categories of characteristics: price, manufacturer, color and a location of the design component image within an image database.', (2) col.

9, lines 59-66, 'In step 400, the present inventive system then chooses records from the database of product characteristics which indicate the characteristics specified by the user in the previous steps. As presently preferred, for each product type there is created a single file or data records, and a number of files of key records corresponding to the number of categories established for product characteristics of the product type.', col. 7, lines 65-68, col. 8, lines 1-5, 'In step 100, a database of records corresponding to design component products is provided to the computer 12. Each record of this database identifies a plurality of characteristics of the corresponding design component products. Products are grouped into files by type, such as chairs, carpets, or wallcovering, and all products within a given type are described within their corresponding records by a common group of categories of characteristics.') and color data comprising a color value for each decorative product (col. 7, lines 58-66, 'In step 350, the user selects the category of color as one characteristic in which to specify a selection. One advantageous manner specifying such a color constraint to the system of the present invention is by exposing a pre-existing product sample bearing the desired color to a colorimeter 28, which preferably digitizes the quantities of hue, chroma and value corresponding to the exposed color, and then transfer such values through channel 34 to computer 12.', col. 9, lines 9-18, 'Where a portable product sample is not available, such as where the pre-existing color selection is paint supplied to walls, a color reference card structure such as is illustrated in FIG. 2 may be utilized at the site of the pre-existing product. Typically a large number of such cards 70 are provided, each bearing a color field 71 having a unique combination of hue, chroma and

value, and a machine-readable identification code 74 which may identify the color field by either serial number or quantification of hue, chroma and value.'); selecting at least one decorative product in one or more of the databases (col. 7, lines 62-68, col. 8, lines 1-5, 'Turning now to FIG. 3, a process of system operation is illustrated for the selection and display of design component products meeting desired constraints of price, color and other characteristics. In step 100, a database of records corresponding to design component products is provided to the computer 12. Each record of this database identifies a plurality of characteristics of the corresponding design component product. Products are grouped into files by type, such as chairs, carpets, or wallcovering, and all products within a given type are described within their corresponding records by a common group of categories of characteristics.'); searching for decorative products (col. 12, lines 56-61, 'In operation of the present invention, the computer 12 initially displays on monitor 16 a query to the user for selection of a design component product type, and preferably displays also a list of valid responses to the query. The user indicates an appropriate selection through keyboard 18 and channel 35.); and identifying one or more decorative products which have color values of the decorative product (col. 7, lines 58-66, 'In step 350, the user selects the category of color as one characteristic in which to specify a selection. One advantageous manner specifying such a color constraint to the system of the present invention is by exposing a pre-existing product sample bearing the desired color to a colorimeter 28, which preferably digitizes the quantities of hue, chroma and value corresponding to the exposed color, and then transfer such values through channel 34 to computer 12.', col. 9, lines 9-18, 'Where a

portable product sample is not available, such as where the pre-existing color selection is paint supplied to walls, a color reference card structure such as is illustrated in FIG. 2 may be utilized at the site of the pre-existing product. Typically a large number of such cards 70 are provided, each bearing a color field 71 having a unique combination of hue, chroma and value, and a machine-readable identification code 74 which may identify the color field by either serial number or quantification of hue, chroma and value.').

However, Sherman does not expressly teach an identification of the color data of the decorative product and coordinating color based on the color data identified.

Dichter teaches an identification of the color data (col. 3, lines 13-15, '...is primarily a red dress of a given style and shape having a pattern of primarily red color variations, as indicated by the stippling pattern.') of the decorative product (col. 3, lines 16-27, 'Frequently, it may be desirable in the desktop publishing environment to provide in the same catalog, for example, another dress of a different style and shape shown at 20 as an original image which is primarily blue on, for example, a yellow background 21, representing a composite original image 22 which may be a photograph. The blue dress has a different pattern of primarily blue variations, as indicated by the different stippling pattern. It is desired by the user to change the color of the blue dress to a color scheme similar to the red dress. It is of course understood that in this example when the term "red" dress is employed, that red is a variation of colors of different hue, saturation, and luminance (HSL).') and coordinating color based on the color data identified (col. 3, lines 16-27, 'Frequently, it may be desirable in the desktop publishing

environment to provide in the same catalog, for example, another dress of a different style and shape shown at 20 as an original image which is primarily blue on, for example, a yellow background 21, representing a composite original image 22 which may be a photograph. The blue dress has a different pattern of primarily blue variations, as indicated by the different stippling pattern. It is desired by the user to change the color of the blue dress to a color scheme similar to the red dress. It is of course understood that in this example when the term "red" dress is employed, that red is a variation of colors of different hue, saturation, and luminance (HSL).').

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the design component selection method of Sherman with Dichter's means to identify the color data of the decorative product and coordinate a color based on the color data identified because Dichter's means enables a color transformation of a color variation in an original image into a new color variation in a transformed image of the original image based on a representative color in a target image (Abstract, lines 1-4).

However, Dichter does not expressly teach a paint database containing color data.

Rice teaches a paint database containing color data (figure 6, element 48, col. 8, lines 46-55, 'Preferably, the color space defined by the architectural paint colors included within the database 48 spans the entire visible spectrum of hues which are known to exist and are represented within currently known color-order systems. Optionally, the database 48 may exclude those colors for which architectural paints are not useful or desirable. For example, architectural paint colors having very low chroma

(dull) or very high (light) or very low (dark) value are generally unused and, thus, are preferably excluded from the database 48.').

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the method of Dichter with the paint database of Rice's method because Rice's method enables a paint color matching and coordinating system comprising an interface for receiving an input reference color, a processor capable of reading a memory, a memory including (1) instructions readable by the processor and (2) a database of architectural paint colors spanning all or most of the known color space, and a display generator (Abstract, lines 1-6).

24. Claims 34-37 and 39-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sherman (Pat. No. 4,931,929 filed 8/14/1987); Dichter (Pat. No. 6,137,903 filed 6/3/1997); and Rice et al. (Pat. No. 6,563,510 B1 filed 3/30/2000, hereinafter Rice) as applied to claims 33 and 38 above, and further in view of Ringland et al. (Pat. No. 6,122,391 filed 11/7/1997, hereinafter Ringland).

25. Regarding Claims 34 and 39, Sherman teaches products consisting of fabric (col. 10, lines 55-58, 'Some characteristics, such as price and color, are easily quantified, while other characteristics such as fabric type or manufacturer, are assigned index number arbitrarily.').

However, Sherman, Dichter, and Rice do not expressly teach products consisting of wallpaper, floor coverings, and window treatments.

Ringland teaches products consisting of wallpaper, floor coverings, and window treatments (Abstract, lines 16-18, 'Wallpaper patterns, drapery material, floor covering or paint can then be rapidly selected on the basis of matching color.').

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the methods of Sherman, Dichter, and Rice with the products consisting of wallpaper, floor covering, and window treatments as taught by the method of Ringland because Ringland's method enables a system for selecting decorative material on the basis of large numbers of high-resolution, full color images of decorative materials stored in a compressed format on an inexpensive medium such as a CD-ROM (Abstract, lines 1-4).

26. Regarding Claims 35, 36, 37, 40, 41, and 42, Ringland teaches the identification information on paint from a primary supplier and secondary supplier (col. 19, lines 60-67, col. 20, lines 1-14, 'A "Paint" button 638 call up a paint matching window 418 (FIG. 7) where a "Match Paint" button 702 finds paint 706 that match the colors of any sample that has been marked for later use. An "Arrow" button 708 allows the user to cycle through the marked samples. Matching paints are displayed according to paint manufacturer 712 (Select Paint Brand button 710). The user is shown a color swatch 714 for each matching paint, along with the paint name 716, the manufacturer's number 718, the page number 720 in the manufacture's book. The paint swatches 714 that are displayed are produced from data derived from actual spectrophotoinetric measurement of actual paint chips. However, the match is made on the basis of the Pantone colors found in the marked sample. Just as the actual decorative material sample colors were

associated with the closest Pantone color through a mean least squares fitting procedures, the individual paints are each associated with the closest Pantone color and paints whose Pantone color matches the Pantone colors of the sample are elected. The user is also able to select a "Coord Paint" button 704 rather than the "Match Paint" button 702.').

27. Regarding Claims 43 and 44, Rice teaches a second database includes information on a plurality of paints (col. 17, lines 20-32, 'A Color Operation Management module 318 controls much of the specialized color ability of the present invention. This module also contains several submodules: Palette Database Retrieval, color Correlated search, Matching Paint Management, Physical Color Measurement Input, and Color Print Management. When the user wishes to search on the basis of color, a color palette of Pantone colors is presented so that a preferred color or color range can be chosen. To display the Pantone palette a Palette Database Retrieval submodule queries the database for RGB values (Color Data 314) of a portion of the Pantone palette to be displayed (Color Data Presentation 316) through the GUI Management module 300.').

28. Regarding Claim 45, Rice teaches background color (Abstract, lines 9 and 10, 'Color values for a background color and up to four foreground colors...').

Conclusion

29. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

Name of Contact

30. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheryl Lewis whose telephone number is (703) 305-8750. The examiner can normally be reached on 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (703) 305-9790. The TC (technology center) for group 2100 customer service number is 703-306-5631. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306 any/or:

(703) 746-5651 (Use this FAX #, only after approval by Examiner, for "INFORMAL" or "DRAFT" communication. Examiners may request that a formal paper/amendment be faxed directly to them on occasions.).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.


Cheryl Lewis
Patent Examiner
October 17, 2003


SRIRAMA CHANNAVAJALA
PRIMARY EXAMINER